

CLAIMS:

1. A method of controlling the transmission of a plurality of frequency channels, each of which has a frame format of substantially the same constant frame period, with each frame comprising a transmission burst of variable  
5 duration, comprising:

controlling the timing of transmission of the frames of each of said frequency channels such that the start of the transmission burst of one of said channels is delayed relative to the start of the transmission burst of another one of said channels.

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2. A method as claimed in claim 1, wherein the start timing of the transmission burst of each of said frequency channels is different from that of the other ones of said channels.

15 3. A method of controlling the transmission of a plurality of frequency channels, each of which has a frame format of substantially the same constant frame period, comprising controlling the timing of transmission of said frequency channels such that the start timing of the frames of each of said channels differs from that of the other ones of said channels, the method further  
20 comprising controlling the transmission of a control channel including a plurality of sets of channel control data each relating to a corresponding one of said plurality of channels such that said sets are transmitted sequentially and the

order of starting of said frames of said frequency channels substantially corresponds to the order of transmission of said sets of said channel control data.

5        4.        A method as claimed in any preceding claim, wherein said plurality of frequency channels are each message traffic channels carrying one or more messages for selective message receivers.

10       5.        Apparatus for controlling the transmission of a plurality of frequency channels, each of which has a frame format of substantially the same constant frame period, with each frame comprising a transmission burst of variable length, comprising:

15               means for controlling the timing of transmission of the frames of each of said frequency channels such that the start of the transmission burst of one of said channels is delayed relative to the start of the transmission burst of another one of said channels.

20       6.        Apparatus as claimed in claim 5, wherein the means for controlling is arranged to control the start timing of the transmission burst of each of said frequency channels to be different from that of the other ones of said channels.

7. Apparatus for controlling the transmission of a plurality of frequency channels, each of which has a frame format of substantially the same constant frame period, comprising:

means for controlling the timing of transmission of said frequency  
5 channels such that the start timing of the frames of each of said channels differs from that of the other ones of said channels, the apparatus further comprising means for controlling the transmission of a control channel including a plurality of sets of channel control data each relating to a corresponding one of said plurality of frequency channels such that said sets are transmitted sequentially  
10 and the order of starting of said frames of said frequency channels substantially corresponds to the order of transmission of said sets of said channel control data.

8. Apparatus as claimed in any one of claims 5 to 7, wherein said plurality  
15 of frequency channels are each message traffic channels carrying one or more messages for selective message receivers.

9. A method of controlling the channel allocation of a receiver, comprising:

20 controlling the transmission of a control channel indicating the current channel allocation of the receiver; whereby the current channel allocation is modified from a first traffic channel to a second traffic channel;

controlling the transmission of the first traffic channel allocated to the receiver such that a channel change indication is transmitted to the receiver and the receiver is caused to receive said control channel so as to receive said indication of said modified allocation to the second traffic channel.

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10. A method as claimed in claim 9, wherein the channel change indication is transmitted more than once before the receiver is required to receive said control channel.

10 11. A method as claimed in claim 10, wherein each of said channel change indications indicates when the current channel allocation of the receiver will be modified.

12. A method as claimed in any one claims 9 to 11, wherein said first traffic  
15 channel has a repeating frame structure, the channel change indications each being transmitted in a respective frame and indicating the number of frames remaining before the current channel allocation will be modified.

13. A method as claimed in any one of claims 9 to 12, whereby the receiver  
20 is caused to receive said second traffic channel after receiving said control channel with a timing determined by said channel change indication.

14. Apparatus for controlling the channel allocation of a receiver, comprising:

means for controlling the transmission of a control channel indicating the current channel allocation of the receiver, whereby the current channel allocation is modified from a first traffic channel to a second traffic channel; and

means for controlling the transmission of the first traffic channel allocated to the receiver such that a channel change indication is transmitted to the receiver and the receiver is caused to receive said control channel so as to receive said indication of said modified allocation to the second traffic channel.

15. Apparatus as claimed in claim 14, wherein the means for controlling the transmission of the control channel is arranged so that the channel change indication is transmitted more than once before the receiver is required to receive said control channel.

16. Apparatus as claimed in claim 15, wherein the means for controlling the transmission of the control channel is arranged so that each of said channel change indications indicates when the channel allocation of the receiver will be modified.

17. Apparatus as claimed in claim 15 or 16, wherein said means for controlling the transmission of the first traffic channel is arranged so that the

first traffic channel has a repeating frame structure, the channel change indications being each transmitted in a respective frame and indicating the number of frames remaining before the current channel allocation will be modified.

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18. A method as claimed in any one of claims 1 to 4 or 9 to 13, wherein said steps of controlling transmission of said channels comprises transmitting signals to a relay station such that the relay station transmits said channels with said corresponding timing relationships.

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19. A method as claimed in any one of claims 1 to 4 or 9 to 13, wherein said steps of controlling transmission of said channels include transmitting said channels.

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20. Apparatus as claimed in any one of claims 5 to 7 or 14 to 17, wherein said means for controlling transmission of said channels includes means for transmitting signals to a relay station such that the relay station transmits said channels with said corresponding timing relationships.

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21. Apparatus as claimed in any one of claims 5 to 7 or 14 to 17 including means for transmitting said channels.

22. A satellite earth station including apparatus as claimed in any one of claims 5 to 7, 14 to 17 or 20.

23. A terrestrial base station including apparatus as claimed in any one of  
5 claims 5 to 7, 14 to 17 or 21.

24. A method of changing channel reception in a receiver, comprising:  
receiving a first traffic channel;  
detecting in said first traffic channel a channel change indication;  
10 receiving a control channel in response to said channel change  
indication;  
detecting a channel indication relating to the receiver in said control  
channel; and  
receiving a second traffic channel designated by said channel indication.

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25. A method as claimed in claim 24, wherein the receiver begins to receive  
said second traffic channel at a time indicated by said channel change  
indication.

20 26. A method as claimed in claim 24 or 25, wherein the receiver begins to  
receive the control channel at a time indicated by said channel change  
indication, before receiving the second traffic channel.

27. A method as claimed in any one of claims 24 to 26, wherein the control channel includes a plurality of channel indications and a plurality of receiver indications, and the receiver receives the second traffic channel indicated by one of the channel indications corresponding to one of the receiver indications which corresponds to said receiver.

28. A receiver, comprising:

- means for controlling the receiver to receive a first traffic channel;
- 10 means for detecting in said first traffic channel a channel change indication;
- means for controlling the receiver to receive a control channel in response to said channel change indication;
- means for detecting a channel indication relating to the receiver in said control channel; and
- 15 means for controlling the receiver to receive a second traffic channel designated by said channel indication.

29. A receiver as claimed in claim 28, wherein the means for controlling the receiver to receive the second traffic channel is arranged so that the receiver begins to receive said traffic channel at a time indicated by said channel change indication.



30. A receiver as claimed in claim 28 or 29, wherein the means for controlling the receiver to receive the control channel is arranged so that the receiver begins to receive the control channel at a time indicated by said channel  
5 change indication, before receiving the second traffic channel.

31. A receiver as claimed in any one of claims 28 to 30, wherein the control channel includes a plurality of channel indications and a plurality of receiver indications, and the means for controlling the receiver to receive the second  
10 traffic channel is arranged so that the receiver receives the second traffic channel indicated by one of the channel indications corresponding to one of the receiver indications corresponding to said receiver.

32. A receiver as claimed in any one of claims 28 to 31, arranged to receive  
15 only one channel at any one time.

33. A message terminal including a receiver as claimed in any one of claims 28 to 32.